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WE CLAIM:

- 1 1. A method of coding video information, comprising:
2 receiving the video information,
3 identifying a video object in the video information,
4 for the video object,
5 coding a first part of the video information associated with the one video
6 object as a first video object layer, and
7 coding a second part of the video information associated with the one video
8 object as a second video object layer.
- 1 2. The method of claim 1, wherein the first video object layer is a base layer,
2 representing the video information at a first level of image quality
- 1 3. The method of claim 2, wherein the second video object layer is an enhancement
2 layer representing a portion of the video information not represented by the base layer.
- 1 4. The method of claim 1 wherein the second video object layer represents the video
2 object at a greater spatial resolution than the first video object layer.
- 1 5. The method of claim 1, wherein the second video object layer represents the video
2 object at different times than the first video object layer.
- 1 6. A method of decoding coded video data, the coded video data including coded first
2 and second video object layers for a video object, the method comprising:
3 receiving the coded video data,
4 decoding the coded first video object layer,
5 decoding the coded second video object layer, and
6 generating a decoded video object based upon the decoded first and second video
7 object layers.

1 7. The method of claim 6, wherein the decoded first video object layer is a base layer
2 representing source video information at a first level of image quality.

1 8. The method of claim 6, wherein the decoded video object includes video
2 information of the video object at a greater temporal rate than would be obtained by
3 decoding only the coded first video object layer.

1 9. The method of claim 6, wherein the decoded second video object layer represents
2 the video object at different times than the decoded first video object layer.

1 10. The method of claim 6, wherein the decoded second video object layer represents
2 the video object at a greater spatial resolution would be obtained by decoding only the
3 coded first video object layer.

1 11. A method of decoding coded video data, the coded video data including coded first
2 and second video object layers, the method comprising:
3 receiving the coded video data,
4 distinguishing the coded first video object layer from the coded video data,
5 decoding the coded first video object layer, and
6 generating a decoded video object based upon the decoded first video object layer.

1 12. A method of coding video information, comprising:
2 identifying a video object in the video information,
3 representing the video object as a series of video object planes,
4 coding a first part of the video object planes as a base video object layer, and
5 coding a second part of the video object planes as an enhancement video object
6 layer.

1 13. The method of claim 12, wherein a first number of the video object planes are
2 coded in the base video object layer and a second number of the video object planes are
3 coded in the enhancement video object layer.

1 14. The method of claim 12, wherein a video object plane in the enhancement video
2 object layer is coded based upon a prediction made from a video object plane in the base
3 video object layer.

1 15. The method of claim 12, wherein a video object plane in the enhancement video
2 object layer is coded based on two candidates for prediction: a video object plane in base
3 video object layer and a second video object plane in enhancement layer.

1 16. The method of claim 12, wherein a video object plane in the enhancement video
2 object layer is coded based upon a prediction made from a second video object plane in
3 the enhancement video object layer.

1 17. The method of claim 12,
2 wherein the coded base and enhancement video object layers provide spatial
3 scalability,
4 wherein at least one video object plane is coded in the base video object layer at a
5 first size and the same video object plane is coded in the enhancement video object layer
6 at a second, larger size.

1 18. The method of claim 12, wherein coding of the one video object plane in the
2 enhancement video object layer is made as a prediction based upon the coding of the one
3 video object plane in the base video object layer.

1 19. The method of claim 12, wherein coding of the one video object plane in the
2 enhancement video object layer is made as a prediction based upon the coding of the one
3 video object plane in the base video object layer.

1 20. The method of claim 12, wherein the coded base and enhancement video object
2 layers provide spatial scalability wherein at least one video object plane is coded in the
3 base video object layer at a first resolution and the same video object plane is coded in the
4 enhancement video object layer at a second, larger resolution.

21. A scalable video coding method providing generalized scalability, comprising:

- identifying a video object from the video information,
- representing the video object as a series of video object planes,
- coding a first part of the video object planes as a base video object layer, and
- coding a second part of the video object planes as an enhancement video object layer, the coding of the coded base video object layer as a candidate for prediction using a single syntax applicable for both temporal and spatial scalability.

22. A method for decoding coded video data, comprising:

- decoding a first part of the video data as a base video object layer, and
- decoding a second part of the video data as an enhancement video object layer, the decoding made as a prediction based upon the decoded base video object layer and with reference to a syntax in the coded video data identifying whether temporal and spatial scalability coding is present in the coded video data.

23. The method of claim 22, wherein the decoding of the enhancement video object layer comprises generating, for the video object layer, one of three predictions from the group of:

- a prediction from a first video object plane,
- a prediction from a second video object plane, and
- a prediction obtained by averaging the first and second predictions.

24. The method of claim 22, wherein the coded video data identifies which of the three predictions should be used for decoding the enhancement video object layer.

25. The method of claim 22, wherein the coded video information represents blocks of data for the enhancement video object layer and the predictions are made independently on a block-by-block basis.

26. The method of claim 22, wherein the coded video data identifies, on a block-by-block basis, which of the three predictions should be used for decoding the enhancement video object layer.